

SD387
.F52
IS2
1996

RP04 1367

**Increasing Programmatic Accomplishments
and
Reducing Agency Differences
in
Prescribed Fire Management**

**Report to
Federal Fire and Aviation Leadership Council**

January 10, 1996



Table of Contents

Signature Page

Executive Summary

Summary Table of Issues, actions, and necessary decisions.

Appendix: Report of Issues and Recommendations

Section 1: Programmatic prescribed fire issues (**Approval required by FFALC**).

Section 2: Issues critical to reducing agency differences in prescribed natural fire management (**Approval required by FFALC and implementation by Agency Directors**).

Section 3: Issues related to more efficient prescribed natural fire operational management (**Negotiated issues not requiring approval by FFALC**).



Signatures

Federal Fire and Aviation Leadership Council



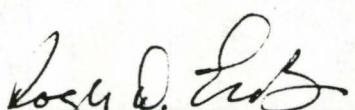
Alan Dunton, Bureau of Land Management

1/11/96
Date



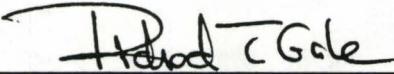
Mary Jo Lavin, U.S. Forest Service

1/17/96
Date



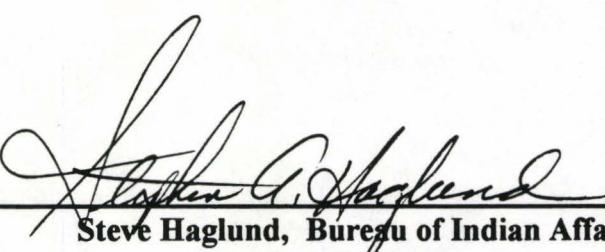
Roger Erb, U.S. Fish and Wildlife Service

1/10/96
Date



Richard T. Gale, National Park Service

01-17-96
Date



Steve Haglund, Bureau of Indian Affairs

1/10/96
Date

Executive Summary

The following report represents the final product of a task group commissioned by the Federal Fire and Aviation Leadership Council (FFALC) to evaluate key issues facing federal prescribed fire management programs. The report establishes interagency agreement on numerous issues identified in recent reviews of fire management policy and programs reported in the Interagency Management Review Team (IMRT) Report and Federal Wildland Fire Management Policy and Program Review. Recommendations from this report that are approved by the FFALC will be implemented through guidelines and policy manuals on an interagency basis. A general discussion of all proposals and issues is included in the report as background and premise for specific recommendations.

Decisions in this report will increase public and firefighter safety, increase effectiveness of key program elements, improve standardization between agencies, expand long-term economic viability of fire management programs, increase efficient use of critically short resources, augment ecosystem health restoration and maintenance efforts, and advance interagency prescribed fire applications as viable management strategies capable of replicating natural disturbance events.

Decisions produced from this report will support fire management program capability and effectiveness while meeting the program flexibility needs of complex fire management programs. This report represents an initial step in resolution of issues generated through national level reviews and internal program analyses. The enclosed signature page documents approval by the FFALC and represents direction to begin implementation of all recommendations.

The report consists of a summary table and an appendix section. Table 1 provides a summary of all issues, actions, and required decisions. Briefing statements for each issue are provided in the Appendix. Appendix Section 1 includes recommendations for primary tasks assigned to the task group: increasing programmatic prescribed fire accomplishments, and implementation of IMRT recommendation A.8, live fuel moisture. This section also includes two other issues prerequisite to increased prescribed fire accomplishments: modifications of national preparedness plan to relieve restrictions on prescribed fire operations (necessary actions completed by FFALC in July 1995), and daily certification requirements for agency administrators during prescribed natural fires (PNFs). Recommendations for three of these four issues require approval by the FFALC prior to implementation.

Appendix Section 2 presents issues critical to reducing agency differences in prescribed natural fire management. Resolution of these issues will facilitate interagency prescribed natural fire management and promote greater use of shared resources to advance the program. The two issues are: consolidation of current documents used by Forest Service and National Park Service for documenting and guiding PNF management into a single document, and consolidation of agency differences in interpretation and use of the maximum allowable perimeter concept into a single, clearly defined policy to be used by all agencies in PNF management. Approval by the FFALC is necessary to direct implementation of these recommendations by agency directors and inclusion of new procedures into agency manual rewrites.

Appendix Section 3 includes issues related to improved efficiency in prescribed natural fire operational management. These issues include: addition of a prescribed natural fire manager position to the NWCG prescribed fire qualifications and training system, mandatory requirements for fire behavior and risk assessment technology during PNF burn plan preparation, prescribed fire position qualifications, participant requirements for PNF burn plan development, and terminology clarification. These issues, addressed by an interagency task group dealing with prescribed natural fire management, have influence on

the NWCG prescribed fire qualifications and training system. The NWCG Prescribed Fire and Fire Effects Working Team has received a briefing regarding these issues, concurred with all recommendations, and will oversee product development, additions to current systems, and full implementation. These issues are presented in this report for informational purposes and no action is required of the FFALC.

Table 1. Summary of issues, actions, and required decisions.

Section/ Issue Number	Issue Name	Action	Decision
Section 1, Issue 1	Increased prescribed fire accomplishments (recommended by Federal Wildland Fire Policy and Program Review).	Prepare recommendation describing mechanisms for escalating prescribed fire program accomplishments.	Approve development of formal designation of prescribed fire resources and dispatch process.
Section 1, Issue 2	Implementation of a live fuel moisture monitoring system, IMRT A.8.	Review IMRT recommendation A.8 and prepare implementation plan.	Establish resource process, supported by coordinated field data collection and site selection, to produce a timely and useful live fuel moisture correlation to existing fire danger indices.
Section 1, Issue 3	Modification of National Preparedness Plan to relieve restrictions on prescribed natural fire operations.	1. Preparation of memorandum for all agencies that clarifies any confusion arising from varying interpretation of current wording. 2. Review and revise entire National Preparedness Plan.	1. DECISION IMPLEMENTED. Interagency memorandum completed, approved by FFALC, and disseminated to all agencies in July 1995. 2. Direct National MAC Group to revise National Preparedness Plan.
Section 1, Issue 4	Daily certification by agency administrators requires considerable time commitment and physical presence on unit during PNFs	Develop an interagency position specifying certification requirements in terms of certification frequency, certification authority, and documentation requirements.	Approve continuation of daily certification requirement, with the authority to redelegate this certification authority to specific line personnel for PNFs presenting lower levels of management implications and concerns.
Section 2, Issue 1	Forest Service and NPS utilize different documents for the purpose of assessing fire situations, developing management alternatives, and establishing operational procedures for prescribed natural fires.	Develop an interagency position supporting a single document that combines the best attributes of both FS Burn Plan and NPS Fire Situation Analysis.	Approve interagency adoption of standardized PNF Burn Plan and promote interagency implementation.
Section 2, Issue 2	Differences exist between agency interpretation and use of Maximum Allowable Perimeter (MAP).	Develop an interagency position stating a clearly understood definition of maximum prescribed extent of a prescribed natural fire.	Approve interagency endorsement of change from Maximum Allowable Perimeter (MAP) to Maximum Manageable Area (MMA) and promote interagency implementation.
Section 3, Issue 1	Review of Prescribed Fire Manager position and development of Prescribed Natural Fire Manager position.	Develop an interagency position recommending whether or not a PNF Manager position should be developed. Develop description of roles and responsibilities and a position task book.	NO FFALC DECISION REQUIRED. Recommendation made to establish a PNF Manager position in June 1995. Concurrence by PFFEWT, September 1995. Completion of task book pending .
Section 3, Issue 2	Mandatory use of the Rare Event Risk Assessment (RERAP) Procedure and Fire Area Simulator (FARSITE) computer model by Prescribed Fire Behavior Analysts.	Develop an interagency position stating if this technology should be adopted as a mandatory requirement for utilization on all prescribed natural fires.	NO FFALC DECISION REQUIRED. Recommendation completed in June 1995. Implementation pending.
Section 3, Issue 3	Qualifications of Prescribed Fire Behavior Analysts	Develop an interagency position stating that no additional qualification standards will be created for the Prescribed Fire Behavior Analyst position.	NO FFALC DECISION REQUIRED. Recommendation concurred with by PFFEWT, September 1995. Implementation under their direction.
Section 3, Issue 4	Requirement for Prescribed Fire Behavior Analyst to be part of teams preparing PNF Burn Plans.	Develop an interagency position stating that the Prescribed Fire Behavior Analyst position is a mandatory component of all teams preparing prescribed natural fire burn plans.	NO FFALC DECISION REQUIRED. Federal wildland fire management agencies concurred with initial recommendation completed September 1995. Implementation pending.
Section 3, Issue 5	Confusion associated with definition of terms related to types of natural fires.	Develop an interagency position stating that all prescribed natural fire will be considered as only prescribed natural fires with no further subdivision into types.	NO FFALC DECISION REQUIRED. Recommendation completed September 1995.

Appendix: Report of Issues and Recommendations.

Section 1: Programmatic prescribed fire management issues.

Issue 1: Increased prescribed fire accomplishments.

Issue 2: IMRT Recommendation A.8: Live fuel moisture (LFM).

Issue 3: Modification of National Preparedness Plan to relieve restrictions on prescribed fire operations.

Issue 4: Daily certification by agency administrator requires considerable time commitment and physical presence on unit during PNFs.

Section 2: Issues critical to reducing agency differences in prescribed natural fire management.

Issue 1: Forest Service and National Park Service utilize different documents for the purpose of assessing fire situations, developing management alternatives, and establishing operational procedures for prescribed natural fires. The Forest Service uses a PNF Burn Plan and NPS uses a Fire Situation Analysis (FSA).

Issue 2: Differences exist between agency interpretations and use of Maximum Allowable Perimeter (MAP).

Section 3: Issues related to more efficient prescribed natural fire operational management.

Issue 1: Review of Prescribed Fire Manager position and development of Prescribed Natural Fire Manager position.

Issue 2: Mandatory use of the Rare Event Risk Procedure (RERAP) and Fire Area Simulator (FARSITE) computer model by Prescribed Fire Behavior Analysts.

Issue 3: Qualifications of Prescribed Fire Behavior Analysts.

Issue 4: Requirement for Prescribed Fire Behavior Analyst (RXFA) to be part of teams preparing PNF Burn Plans.

Issue 5: Confusion associated with definition of terms related to types of natural fires.

Section 1: Programmatic Prescribed Fire Management Issues

Issue 1: Increased Prescribed Fire Accomplishments.

Introduction

In an effort to maintain, enhance, and restore fire dependent ecosystems, additional prescribed fire applications on a broader scale are needed. The Federal Fire and Aviation Leadership Council recognizes that the prescribed fire program needs to be escalated. The question is how to get this done, recognizing agency, social political, and economic constraints. Some elements within this mix will need to be dealt with outside agencies, but most of the constraining elements are agency specific.

Significant direction exists in various agencies. The Federal Wildland Fire Management Policy and Program Review gives clear direction and goes as far as to suggest specific funding, workforce, and pay element changes to promote the escalation of this fire management program element. Interagency deliberation on this issue resulted in the following recognition of limiting factors, assessments of existing efforts to build mobile teams and recommended proposals.

Limiting Factors/Barriers:

A. Funding:

Appropriated funds are limited. Increases in fuel treatment funds have not been commensurate with increases in presuppression elements of the fire management program.

Extensive fuel treatment applications are not consistently possible every year, due to other work priorities, weather factors and suppression priorities. Consistent carryover funding authority needs to be established to maximize fiscal capability during years of good fuel treatment opportunities.

Funding for fuel treatment is predominately resource specific such as specific funding for natural fuel abatement, various wildlife habitat components, activity created fuel, etc. Most prescribed fire applications result in multiple resource benefits. Funding from various resource elements could be combined into an "escrow" account to finance fuel treatment on a program basis over multiple years rather than at the project level annually.

There are significant agency differences in prescribed fire funding. The use of non appropriated funds may be used for prescribed natural fire applications in some agencies, but not others. Consistency in funding authorities will reduce inequities within programs and decrease complexity when dealing with exchanging interagency personnel and funds.

Programs and specific projects have been short term output and specific resource oriented. Programs need to be established that reflect long term goals on a fire regime based application frequency. Where funding is limited for programs designed to substantially reduce risk of

severe wild fire occurrences. Non-traditional funding opportunities should be explored to meet long-term goals of reducing risk and suppression costs.

B. Downsizing:

All Federal Agencies are expecting continuing reductions in the number of personnel.

Availability of personnel is limited by various factors. We have not demonstrated that fire management objectives are "job one" except periodically under the most severe fire suppression emergencies.

Will need to look at ways to organize existing personnel into more efficient working groups on an interagency basis on local, regional, and geographic scales.

Increase personnel availability by considering the following policy changes:

- Seek changes in hiring authority to better utilize trained Native American workforce elements.
- Consider contract options and expense of utilizing private sector resources. Current practices permit AD hiring exclusively for emergency situations.
- Consider volunteers and student conservation association enrollees for low risk applications (liability issues need to be discovered/mitigated).

C. Agency Culture:

Most land management agencies have developed a proud heritage of protecting resources and public values against the ravages of wildfire. The fire suppression element of the fire management program is dominant. This dominance needs to remain in agencies that have wide ranging resources protection responsibilities. In all cases, the prescribed fire element need to be elevated in importance and recognition as an integral part of the fire management program.

Considerations discussed include:

- ◆ Escalate the visibility prominence and importance of the prescribed fire element of the fire management program.
- ◆ Include prescribed fire reporting in Nat'l fire situation report (leads to Nat'l Fire Management Situation report).
- ◆ Increase recognition of the overall benefit of prescribed fire program outputs to meeting missions/goals of agencies.
- ◆ Recognize the long-term cost effectiveness of prescribed fire as a management tool in reducing suppression expense and risk.
- ◆ Display internally/externally the value of the prescribed fire program in support of the total land management objectives.
- ◆ Risk associated with prescribed fire program implementation must be accepted and valued against the long-term risk of non-application.
- ◆ Build local understanding of fire management programs and increase public awareness and acceptance through education of outputs.

- ♦ Need memo from agency levels to field regarding program priority.

D. Use of Prescribed Fire Resources:

Unlike fire suppression resources, prescribed fire resources are used specifically within agencies. Agency use has been predominately provincial with little sharing. There are numerous examples in some agencies of successful local sharing of resources where travel/per diem expense do not adversely affect treatment costs. There is no formal organized management capability for prescribed fire application that mimics the successful organizational structures of wildfire suppression.

- ♦ Establish both agency and interagency prescribed fire teams.
- ♦ Develop nomination/selection process.
- ♦ Identify various RX Fire resources needed.
- ♦ Consider National/Regional/Local oversight teams.
- ♦ Establish need for resource autonomy to prescribed fire programs.
- ♦ Establish availability and fiscal standards.
- ♦ Develop implementation team, module, single resource configurations.
- ♦ Use existing information (NPS) to style future organizations.
- ♦ Establish early "test" demonstration for implementation.
- ♦ Provide summary result of test for operational and fiscal.
- ♦ Continue to use and build on successful local team concepts.

Proposal:

We suggest an initial effort be developed to establish various levels of prescribed fire support resources on an interagency basis. This will provide a first step towards management actions necessary to successfully increase program outputs. A test program could be developed in early '96 in the Southeast part of the country when significant dormant season prescribed burns are planned. Most other potential prescribed fire resources across the country are not involved in fire management activities during this period. If priority and funding is established they could be mobilized to test fiscal feasibility and operational success of this proposal.

Local limiting factors in all areas start with personnel and equipment availability during very limited periods of open prescription "windows". Prescription elements are weather dictated. When prescription elements are favorable, multiple applications could be done in a short time frame with reduced risk of escape and impacts to other resource values.

Establish and select candidate prescribed fire implementation modules to conduct prescribed burn projects in the Southeast area on an interagency basis. Develop test through Regional Offices and National Office Support. Track resource outputs and costs to provide basis of future implementation recommendations to Leadership Council in Spring of '96. Initial efforts should be directed at the establishment and application of the RXF2 concept and the negotiation of single resources various projects might require. Closest available forces should be utilized to minimize expenses. Some discretion will allow the test to experience variations in potential costs to verify differences between reality and perception. This initial test could allow agencies to utilize highly skilled fire personnel, increase program outputs and demonstrate interagency cooperation in meeting agency goals.

Differences in agency capability and needs is real and closely recognized in this proposal. Due to this, a range of prescribed fire resources is suggested. The base 8 hour funding of personnel is a complex and critical element of the fiscal feasibility of this concept. Prescribed fire costs per acre will be dramatically increased in most situations if the base 8 is paid by project funds. There is a strong suggestion that formally established team and modules be considered a program level cost and base 8 paid from a National account. Per diem travel could be a project cost element. The NPS method is a good example and was widely accepted within the western Parks during the operations season of '95 (Zimmerman, IWFC Meeting, 1995).

Recommendation:

Formalize key prescribed fire resources and develop both regional and national resource data bases for dispatch availability. The following resource components are suggested:

Four Prescribed Fire Management Modules.

1. RXFI Team - Implements complex fire plans consists of Type I Burn Boss, Ignition Boss, Operations Section Chief, and Prescribed Fire Behavior Analyst. ORDER: RXFI Team - RXBI, RXTI, OSC2, RXFA.
2. RXF2 Team - Implements intermediate fire plans consists of Type II Burn Boss, Ignition Boss, Division Group Supervisor, and Prescribed Fire Behavior Specialist. ORDER: RXF2 Team - RXB2, RXI2, DIVS, AND RXFS.
3. RX Fire Support Module - Supports implementation of various fire plan elements of ignition, holding, weather, monitoring, and/or preparation. Consists of crew leader and 4 to 6 crew members. ORDER: RXFS, designate numbers of module members requested.
4. Prescribed Natural Fire Team - Develop and/or implement prescribed natural fire plans. Consists of Prescribed Natural Fire Manager, Operations Section Chief II, Logistics Section Chief II, Prescribed Fire Behavior Analyst. ORDER: RXNF - PNFM, OSC2, LSC2, RXFA.

Single Resources

- ◆ Any individual module position.
- ◆ Any NWCG guideline identified position or resource.
- ◆ Crews, Type I or II.

Summary:

Scientific data combined with monitored results of land management practices have resulted in increased knowledge of the long-term effects of fire exclusion in fire adapted ecosystems. Improvements in ecosystem health is dependent on increased prescribed fire applications on broad scales. Acceptance and understanding of this fact in professional and private sectors is fostering an advocacy for dramatic increases in existing prescribed fire programs.

Recent professional reviews, notably the Draft Federal Wildland Fire Policy and Program Review, point out multiple needed changes in the fire management program that will potentially increase prescribed fire

outputs. Many of these proposed changes have been considered in this discussion to formulate prescribed fire support infrastructure on an interagency basis.

Emphasis is placed on qualified personnel, their availability to participate in all elements of the fire management program, interagency exchange of resources, reduction of administrative barriers in funding, dispatch, hiring, and non-traditional private sector personnel use.

The increases sought in prescribed fire programs are substantial. The establishment and use of prescribed fire support resources is a logical and good first step. Significant program change will require incremental change that will incorporate the combinations of proposals already identified in a timeframe that approaches 'as soon as possible.'

The urgency for needed program changes will not be diminished over time. Every season that we continue to subvert and alter the disturbance element of fire in fire adapted ecosystems, brings us closer to diminishing management options, increasing risk to firefighter safety, and escalating threats to private resources.

The values associated with increased outputs from the escalation of the prescribed fire program are becoming universally accepted. The development of interagency prescribed fire support resources, configured as teams, modules, and single resource elements that can respond to interagency needs when conditions are optimum to maximize essential program outputs is a highly recommended first step in significant program change. This concept may be the start of accomplishing outputs that national, geographic, and local reviews are recommending.

Issue 2: IMRT Recommendation A.8: Live Fuel Moisture (LFM).

Introduction:

The IMRT task group assigned to prepare an action plan for IMRT Report recommendation A.8 has recognized the importance and need to relate measured live fuel moisture (LFM) threshold values to observed fire behavior. Their presentation to the IMRT provided thirteen recommendations which offer a wide range of opportunities and directives for data collection across the western half of the country. Those recommendations, however, are not specific to location or species which have demonstrated propensities for live fuel contributions to fire behavior characteristics beyond existing fire behavior prediction system fuel model capability. In addition, the recommendations do not generally differentiate responsibility and capability between research and field operations regarding data collection and analysis. The proposal discussed in the following section clearly addresses the value of correlation between live fuel moisture data and observed fire behavior with a descriptive relationship of this correlation to existing fire behavior indices.

Basis of Proposal:

There is a real need for live fuel moisture data collection, analysis and fire behavior correlation modeling. The existing task force proposal has considerable merit and warrants very high regard. In an attempt to make it realistic, achievable, and meaningful, the following key suggestions are offered:

- ◆ The west-wide approach is too broad and complex for this initial effort. In an effort to maximize time and effectiveness of the LFM task, we recommend that data collection be constrained to specific species and locations of known problem areas.
- ◆ Data collection will be directed and monitored (to ensure quality and consistency) by research personnel. Benefiting agencies will work in conjunction with research organizations to provide data collection resources selected at field locations.
- ◆ A research project to provide LFM data correlation and analysis be developed with priority commensurate with National Interagency needs regarding this issue. Recommendation is made to maximize existing data and established processes to produce the earliest possible research products.
- ◆ Research project output is designed to develop LFM threshold values correlated to existing fire behavior indices locally, regionally or Nationally (if possible) can be used to make strategic and tactical fire management decisions.

Proposal:

In support of intensifying firefighter safety, escalating suppression success, improving risk assessment and maintenance of air quality, the following specific recommendations have been prepared:

- ◆ Establish a pilot LFM data collection process at selected sites in 1996.
- ◆ Coordinate potential prescribed burn locations with research into data collection areas.
- ◆ Establish research project design and management infrastructures in 1996.
- ◆ Synthesize existing information from previous studies, data collections and associated research efforts.

- ◆ Develop wildfire response capability of research oversight personnel to selected key areas during peak fire season occurrence.
- ◆ Construct a consistent, easily understood procedure that will more clearly illuminate situations when live fuel components of fuel beds will and are becoming contributors to significant fire spread and intensity for use by on-the-ground practitioners.

Issue 3: Modification of National Preparedness Plan to relieve restrictions on prescribed fire operations.

Discussion:

During the 1994 fire season considerable confusion surrounded the interpretation of the National Preparedness Plan wording regarding prescribed fire activity in Levels IV and V. Decisions to allow new prescribed natural fires or management ignited prescribed fires were driven by varying and inconsistent interpretations of preparedness plan wording.

Considerable discussion has taken place in regard to this issue. In January 1995, a memorandum was prepared for the National Multi-Agency Coordinating Group requesting revision of the National Mobilization Guide and National Preparedness Levels. After additional discussion, it was concluded that it was not the wording of these levels but the variation in interpretation that was responsible for restrictions to prescribed fire programs.

It was then determined that interpretation of the national preparedness levels should be addressed to reduce potential effects of interpretation differences. Action should be taken to permit continuation of different fire management alternatives concurrently. Continued operation of individual unit fire management plans and risk mitigation features built into them, rather than overriding these plans during periods of intense wildfire activity is the principal goal.

Proposal:

It was felt that to effectively deal with this issue, two distinct products are necessary. These will be completed over both a short- and long-term scale. The short-term strategy, to be completed immediately, consists of preparation of a memorandum for distribution through all agencies that clarifies and reduces confusion arising from interpretation of current wording and describes management actions during approval phases of prescribed fires under national preparedness levels IV and V. The short-term action has been completed in the form of a memorandum reviewed by all agencies, and approved by the Federal Fire and Aviation Leadership Council. Copies have been sent to all agency offices and is enclosed in this document.

The long-term proposed solution is based on the premise that management's need is to permit continuation of different fire management alternatives concurrently rather than terminating one entire program phase. There is no intent to allow prescribed fire activities to adversely impact significant national mobilization efforts for wildfire suppression at high levels of activity. Given this information, a longer term effort should be undertaken by the National Multi-Agency Coordination Group at NIFC which involves a review of the entire National Mobilization Guide and modification of any sections necessary to adequately address the issue of increasing readiness in response to escalating fire danger and resource commitment to suppression actions. Until this task is undertaken, direction for interpretation of the prescribed fire element of the programs exists in the jointly approved memorandum.



FEDERAL FIRE AND AVIATION LEADERSHIP COUNCIL

July 18, 1995

Memorandum

To: Federal Wildland Fire Management Agency Administrators

From: Federal Fire and Aviation Leadership Council

Subject: National Preparedness Plan Interpretation

During the 1994 fire season considerable confusion surrounded the interpretation of the National Preparedness Plan wording regarding prescribed fire activity in Levels IV and V. Decisions to allow new prescribed natural fires or management ignited prescribed fires were driven by varying and inconsistent interpretations of preparedness plan wording.

Preparedness plans were developed following the 1989 Fire Management Policy Review. This review stated the need for agencies to establish regional and national contingency plans to ensure that fire preparedness increase in response to escalating fire danger and actual wildfire activity. At the time of their development, agencies were in the process of preparing new fire management plans and the guidance presented by preparedness plans assisted in decision making and program management. The purpose of preparedness plans is to manage and control risk by placing emphasis on long-term planning and accountability, reducing the probability of prescribed fire escape, and ensuring that fire managers consider potential impacts of prescribed fire activities on suppression capability.

Since the initial development of preparedness plans, individual administrative units are continuing to complete or revise fire management plans. Decision criteria, monitoring requirements and prescriptions described in revised fire management plans of all agencies engaging in prescribed natural fire programs are prerequisite to PNF classification and ensure that unreasonable risks to local, regional, and national preparedness capabilities will not occur as a result of indiscriminate management. To aid in decision-making, each individual prescribed fire project will have an operational burn plan prepared which identifies operational goals, resource needs, prescription elements, intermediate goals and predetermined holding actions, and contingency actions necessary for project implementation.

Preparedness plans as written have achieved their purpose by helping to mitigate risk and guide fire management accountability during active and complex periods of wildfire activity. Interpretation of these plans, however, often does prohibit nearly all prescribed fire declaration and management at National levels IV and V. In addition, regional levels retain authorities to interpret or restrict actions at reduced preparedness levels. This interpretation, although not the exact definition of the current wording, is resulting in unwarranted restrictions or total exclusion of prescribed fire activities, particularly when such fires could be most effective ecologically (an example is the preclusion of fire

from cool/moist sites where fire is infrequent, occurring only during periods of relative drought). Moreover, inconsistent interpretation of preparedness plans is essentially overriding and negating evaluation criteria developed in local fire plans.

In response to the need for identified review and continuing concern over this issue, the need for modification or redevelopment of the National Preparedness Plan wording was recently addressed by the Interagency Prescribed Natural Fire Working Group. This group was established to develop common terminology, consistent procedures, and greater clarity wherever possible among all agencies involved in prescribed fire management. Discussion involving the preparedness plan issue concluded with realization that it is not the current wording but inconsistent interpretation of that wording that is creating real and perceived barriers to prescribed fire management during long duration high preparedness levels situations. This fosters a risk aversion posture that is diminishing overall effectiveness of the fire management program.

The Interagency Prescribed Natural Fire Working Group agreed that both short and long-term strategies are necessary for complete resolution of this issue. The short-term strategy represents an interim action and consists of development of improved and standardized interpretations of preparedness plan intent and clarification of actions necessary at National preparedness levels IV and V for the 1995 fire season. This memorandum has been prepared to define these interpretations and actions for continued management of prescribed fires and will be distributed throughout all agencies engaged in prescribed fire management. The long-term solution involves review of the entire National Preparedness Plan and modification to all sections as necessary to adequately address the issue of increasing readiness in response to escalating fire danger, activity, and resource commitment to suppression actions. The intent of this review is twofold: to permit the continuation of different fire management alternatives concurrently rather than terminating one entire program function; and to not have one component of the fire management program, such as prescribed fire, adversely impact national mobilization capability for wildfire suppression activities. A key feature will be to allow fire management plans, and risk mitigation features built into them, to operate, rather than be overridden during periods of intense wildfire activity.

Prescribed fire management is faced with the dilemma of achieving resource management objectives within acceptable limits of risk because meeting these objectives involves operating within high-risk parameters. Some of the most difficult decisions facing fire managers are associated with high risk/consequence situations that result when candidate prescribed natural fire ignitions occur in mid-to late-season during extended drought conditions. The most effective means of managing risk on these sites is often the realization of every opportunity to utilize prescribed fire when conditions permit. Thus, as part of the long-term solution, agencies should strive to become more proactive in management ignited prescribed fire programs and implement these kinds of fires whenever acceptable opportunities present themselves. Management ignited prescribed fire is a valuable technique that can be applied in ways that are markedly beneficial to prescribed natural fire programs and reduce future risk associated with fire management actions.

Recommendations pertaining to 1995 western fire season activities include those listed in the following table and taking necessary measures to expand risk mitigation management through application of management ignited prescribed fire. Necessary actions for risk mitigation pertaining to preparedness plan interpretations, as listed below, include some items already required by individual agency policy. The importance of facilitating the functioning of approved unit Fire Management Plans, however, warrants reinforcement of the value of these items to risk mitigation determination.

Preparedness Level	Current Wording	Necessary Actions for Risk Mitigation
IV	Suspend declaration of Prescribed Natural Fires, except those of no significance or risk.	<p>Prescribed fire applications can continue or be initiated if the following conditions are met:</p> <ol style="list-style-type: none"> <li data-bbox="933 381 1375 585">1. All units conducting prescribed natural fire programs must have completed and approved Fire Management Plans including decision criteria and prescription elements (local unit responsibility for Go/No-Go Decision). <li data-bbox="933 612 1375 907">2. Regional or State level agency representative must concur with local agency recommendation for PNF or MIPF. Evaluation of significant risk is made by Regional or State agency representative in presentation of prescribed fire implementation proposal to geographic multi-agency coordinating (MAC) group prior to prescribed fire approval. <li data-bbox="933 934 1375 1090">3. A coordination/tracking function will be established to track prescribed fires and resource commitments at Geographic area and National coordination levels.
V	Curtail all new Management Ignited Prescribed Fires.	<p>Items 1 - 3 carried forward from Level IV.</p> <ol style="list-style-type: none"> <li data-bbox="933 1195 1375 1406">4. National level agency representative must concur with Regional or State recommendation. National level representative will present evaluation of significant risk in proposal to National MAC Group prior to prescribed fire approval.

The principal goal of these recommendations is to permit individual unit fire management plans to work while recognizing the importance of each decision to the National program. These plans include decision criteria and prescription elements that indicate whether or not a particular PNF is significant and poses considerable risk. Test for significance must be made on a program basis and elevated to the Regional or State level at higher preparedness levels. Provided all elements included in fire management plans are met for initial declaration and continued management as a PNF, the National Preparedness Plan wording permits this kind of activity at levels IV and V with the proposed added levels of decision analysis.

Please distribute this information to all units involved in prescribed fire management, priority setting, dispatch mobilization, and to agency representatives to Geographic Area Coordinating Groups. If you have any additional questions, please contact Dave Bunnell at (208) 387-5220 or Tom Zimmerman at (208) 387-5215 at the National Interagency Fire Center (NIFC).

Signatures

Federal Fire and Aviation Leadership Council



Alan Dunton, Bureau of Land Management

6/14/95

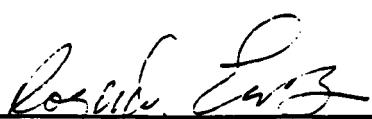
Date



Mary Jo Lavin, U.S. Forest Service

18 July 95

Date



Roger Erb, U.S. Fish and Wildlife Service

6/14/95

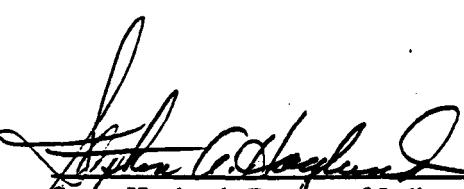
Date



Richard T. Gale, National Park Service

CG-14-95

Date



Steve Haglund, Bureau of Indian Affairs

6-14-95

Date

Issue 4: Daily certification by Agency Administrators requires considerable time commitment and physical presence on unit during PNFs.

Discussion:

Daily certification by agency administrators is a practical requirement generated through the Final Report of the Fire Management Policy Review Team, May 1989. This report states,

Recommendations:

6. The responsible line officer or designee shall certify in writing daily that a fire is within prescription and adequate resources are available to ensure that each prescribed natural fire will remain within prescription through the ensuing 24-hour period, given reasonably foreseeable weather conditions and fire behavior. If the fire cannot be kept within prescription with available forces and funds, it shall be declared a wildfire and appropriate suppression action initiated.

Some federal wildland fire management agencies included this recommendation as policy in their manual and guideline as evidenced by the following excerpts from federal agency manuals:

Forest Service Manual 5140:

5140.22 - Prescribed Natural Fire Implementation. The Fire Management Action Plan (FSH 5109.19, ch. 50) shall include the following:

3. Analysis and decision process that provides for:
 - d. Provision for daily revalidation that the fire is within prescription and is expected to remain so based on current and expected conditions.

National Park Service Guideline NPS-18:

NPS-18, Section III, Chapter 5, Page 11: Prescribed Natural Fires.

2. Certification. For each fire managed as a prescribed natural fire, the superintendent (or acting superintendent) is required to certify daily that adequate fire management resources and funding are available to manage the fire within the prescription approved for that fire. While it is understood that the information for making this certification will be collected and compiled by prescribed fire managers (prescribed burn bosses or prescribed fire managers as defined in NPS prescribed fire qualifications) and FMOs, the final, certifying signature must be the superintendent's.

Other federal agencies (Bureau of Land Management, Fish and Wildlife Service, and Bureau of Indian Affairs) while not having specific language in their policy manuals do follow the 1989 Fire Management Policy Review Team Report recommendation and subscribe to daily certification requirements.

The Fire Policy Review Team report was published in May 1989 while the National Park Service and Forest Service manuals were updated in 1990 and 1991, respectively. The daily certification requirement has been in effect since then.

During implementation and management of prescribed natural fire programs since the inception of the daily certification requirement, it has become apparent that this requirement as written can be very constraining. It requires Agency Administrators to physically remain on the unit to complete the signature requirement. It also demands a time commitment from already heavily committed managers.

Two specific questions have been identified concerning this requirement.

1. Do first line Agency Administrators have to remain on-site to complete this requirement or can that authority be delegated to subordinates?
2. Do all prescribed natural fires have to have this certification or revalidation completed daily or can the frequency of this constraint be varied depending upon the specific circumstances of each particular fire?

The initial discussion of this issue followed closely the discussion of classification of PNFs into different types. As a result, some thoughts involving this issue are closely related to the concept of having active and inactive PNFs (i.e. relating certification requirements to type of fire). Since the proposal in SECTION 3, ISSUE 5 rejected development of a PNF classification system, it seems inappropriate to develop a certification requirement based on PNF status.

It is appropriate to develop a system whereby certification requirements can be less rigid, **but still be maintained**. This system will facilitate greater compatibility with Agency Administrators' schedules and other demands and permit delegation of approval/signing authority, dependent upon specific circumstances associated with individual fires and agency administrator discretion. For fires with minimal fire behavior activity, low risk, low threat, and low complexity, certification frequency could be less than is necessary for fires presenting greater management implications and concerns. But, requiring less than daily certification poses a situation where a fire can escalate rapidly in activity and the change in conditions could push available holding resources to the limit or exceed this capability. In other words, the potential exists for fire escalation in the absence of attention that would be provided through a daily certification requirement. Thus, relaxing the daily certification requirement has marked drawbacks.

Proposal:

Continue to maintain the daily certification requirement but establish a less rigid system whereby this authority can be redelegated to specific positions as appropriate. Agency Administrators can delegate, in writing, the certification/revalidation authority which permits the delegated individual to certify that the fire will remain in prescription and adequate resources are available to manage the fire. This delegation also permits the delegated individual the authority to commit holding resources as needed. Delegations must be responsible and lines of delegation are from the Agency Administrator to another line officer or supervisory line officer; a deputy or assistant line officer; a primary staff individual with fire credentials; or PNF Manager. If or when fire conditions or complexity levels escalate, revalidation authority will automatically and immediately revert to the Agency Administrator originally

responsible for approval of the prescribed fire plan and who made the initial redelegation of certification authority. No other delegations are allowed. For a particular fire, the responsible agency administrator can make the decision regarding delegation of daily certification authority.

For all prescribed natural fires, it does not seem logical to require the same level of documentation and reporting. Certainly for fires of short duration which have presented low concerns and need for close attention, documentation requirements could be less than for those fires of long duration and high concerns.

Section 2: Issues Critical to Reducing Agency Differences in Prescribed Natural Fire Management.

Issue 1: Forest Service and National Park Service utilize different documents for the purpose of assessing fire situations, developing management alternatives, and establishing operational procedures for prescribed natural fires. The Forest Service uses a PNF Burn Plan and NPS utilizes a Fire Situation Analysis (FSA).

Discussion:

Differences between Forest Service and National Park Service policy regarding appropriate documentation exist and are readily apparent to anyone involved in PNF management in both agencies. Both systems have some shortcomings. The current Forest Service Burn Plan fails to provide a complete description of the current situation while providing excellent coverage of planned management activities. Conversely, the National Park Service Fire Situation Analysis provides detailed information on the current situation and management alternatives but does not adequately address proposed management actions to be taken at various stages of management of the fire.

If, in the future, there is to be greater use of shared personnel and skills among the agencies, it will become more important to utilize a common system that is or can be easily understood and implemented by personnel from all agencies. Development of a single document that addresses the current situation, management alternatives, and a desired program of action for prescribed natural fires is prerequisite to efficient PNF management.

Proposal:

It has been concluded that a task group should be established to develop a single PNF management document. This document should combine the strongest aspects of both the FS Burn Plan and NPS FSA into a single document. This action was planned for completion in time for distribution to selected field units for testing over the remainder of the 1995 fire season. Field units not involved in testing will receive the document for review and all comments will be consolidated and recommended revisions will be completed by October 31, 1995.

The task group charged with development of this draft burn plan included:

Bill Kaage	NPS, Everglades National Park
Mark Woods	USFS, Nez Perce National Forest
Ed Duncan	NPS, Yosemite National Park
Andy Norman	USFS, Bridger-Teton National Forest
Jesse Duhnkrack	NPS, Grand Canyon National Park

Tom Nichols
Dave Bunnell

NPS, Pacific West Field Area
USFS, NIFC

The final version of this burn plan will be recommended to all agencies for adoption and inclusion in agency manuals

Recommendation:

All agencies involved in PNF management adopt the final PNF Burn Plan as a standard interagency document to be used for preparing and documenting a program of action to be followed during management of natural fires. Agencies should incorporate this document into their respective manuals or guidelines.

The Prescribed Natural Fire Burn Plan is enclosed in the following pages.

Wildland Fire Observation Record

(Items collected during observation either on-scene or aerial monitoring; mandatory for prescribed natural fires, optional for use on management ignited prescribed fires and wildfires)

Fire Name _____ Fire # _____

Fire Type (check one): PNF _____ MIPF _____ Wildfire _____

Management Unit _____ Date _____

Time _____ Current fire size (acres) _____

Observation location _____ (Attach map indicating active fire perimeter, spread direction, observation location, time, date, and other significant information.)

Vegetation type/Fuel Model (of area burned) _____

Fire activity (narrative description of fire spread, perimeter growth, and relative intensity) _____

Projected fire activity (based on forecasted weather, and changes in topography and fuel changes) _____

Smoke dispersal, including both plume trajectory and subsidence movement _____

Special concerns/threats and/or recommendations _____

Weather Observations/Fire Behavior Observation with location/elevation (ATTACH OBSERVATIONS...There are several tally sheets to record observations and units may choose their own).

Prepared by: _____ Date _____
Name, Title, and Qualification

Reviewed by: _____ Date _____
Name, Title, and Qualification

Interagency Prescribed Natural Fire Burn Plan

1. General Information (location map, fuel types, etc..)

The intent of this section is to provide simple applicable information about the location within the management unit and information related to the ignition point and area where the fire is expected to burn..

2. Fire Projections (expected and severe weather events)

Some form of analysis is needed to project fire size over time, whether it is FARSITE, RERAP, BEHAVE or other newer technology as it becomes available.

3. Identification of Maximum Manageable Area (MMA)

The identification of the maximum manageable area should include input from staff specialists as applicable. With larger fires that are expected to cover large areas it is recommended that an interdisciplinary approach be taken, so that appropriate interests are represented and concerns are known. As each interest identifies concerns a compromise is reached where all disciplines can eventually agree to the area where the fire will spread. For areas where rapid fire growth is the norm, and duration may be short, this area may need to be defined before ignitions occur.

The term, maximum management area (MMA), serves as the descriptor of the prescribed natural fire geographic or spatial prescription element.

- ◊ the MMA will be developed as part of the initially approved burn plan,
- ◊ all actions planned to reduce fire spread will be annotated by holding lines that are developed within the MMA and displayed in the approved planning document,
- ◊ once established in the PNF Burn Plan and approved by the Agency Administrator, this fire size is fixed and not subject to change,
- ◊ the MMA will define firm limits of management capability to accommodate the social, political, and resource impacts for all PNFs,

4. Statement of Objectives and Narrative Risk Assessment which may consider the following items:

Within this section there should be a list of items that management units must consider when authorizing a natural fire that may burn for many days or months. The list can be extensive or less so, depending on the management unit, the fire, but should include the following statement of objectives and evaluations:

- ◆ firefighter safety,
- ◆ natural/cultural resource objectives and constraints,

- ◆ fire behavior,
- ◆ fire history,
- ◆ threat to life and property,
- ◆ smoke management concerns and dispersion corridors,
- ◆ resources available for current and expected needs,
- ◆ effects on visitors, users, cooperators, local communities, etc...,
- ◆ consideration of effect on other fire management activities,
- ◆ weather/ season /drought prognosis

5. Monitoring actions

The intent of this topic is to determine the intensity of monitoring needed and the time frame with which the fire is observed. This may also document when and why a fire will go from aerial reconnaissance to on the ground monitoring teams.

6. Holding actions

This section may act as a place to identify known holding actions that may be expected. If a weak section on the MMA will require line construction and burning out, and then mop-up and patrol, it should be mentioned here with a plan as to how and when this may be done. When executing these actions, it is recommended that clear direction and an action plan be developed to guide the tactical deployment of the manpower needed to accomplish the objectives of the holding action.

7. Estimates of qualified resource needs to manage the fire

Describe the number, type, and qualifications of fire management resources (overhead, crews, engines, helicopters, etc) which will be needed to implement the monitoring and holding actions.

8. Cost estimate to manage the fire/are adequate funds available?

Calculate a total cost estimate for the managing the PNF, separating costs for planning, monitoring, holding, and evaluation.

9. Contingency actions

Describe the conditions which would result in conversion of the PNF to a wildfire, which may include exceedance of prescription parameters or escape of the fire beyond the MMA. Specify that an EFSA will be prepared which will evaluate a series of suppression options under an appropriate suppression response. Describe who would make the decision to convert the PNF to a wildfire and who would assume command of the wildfire. Describe how the resources assigned to the PNF would be organized to support the suppression effort.

10. Information plan

Describe the provisions to keep the public, cooperators, users, and internal personnel informed of the PNF and its subsequent growth.

11. Decision criteria for routine revalidation

Describe the process and criteria by which the PNF is evaluated to determine if the fire is still burning within prescription parameters and is predicted to remain so for the next 24 hours.

12. Evaluation process

Describe how the fire will be evaluated from both a managerial and resource effect perspective. This may include financial, operational, ecological or similar type assessments.

13. Summary Statement

Describe the relationship of the risk assessment and fire projections to the implementation actions and MMA. This summary statement combines the elements of the PNF Burn Plan and provides a rationale for establishing the MMA based on mitigation of identified risks.

14. Required Signatures

INTERAGENCY PRESCRIBED NATURAL FIRE BURN PLAN

1. General Information

Administrative Unit: _____

Fire Name: _____

Administrative #: _____

Start Date/Time: _____

Discovery Date/Time: _____

Present Size: _____

Location

Legal//Lat/Long// UTM: _____

Geographical Location: _____

Fuel Model: _____

Vegetation Type: _____

Slope: _____ Aspect: _____ Elevation: _____

2. Fire Projections and map:

Projected fire area under expected weather conditions: _____ acres on: _____

Projected fire area under severe weather conditions: _____ acres on: _____

3. Maximum Manageable Area (MMA). See attached map _____ acres.

4. Objectives and Risk Assessment Considerations

a. Threat to MMA

b. Threat to public use and firefighter safety

c. Natural/cultural resource objectives and constraints/considerations

d. Smoke dispersion and effects

e. Weather/season/drought prognosis

f. Other

5. Monitoring Actions

6. Holding Actions

7. Resources Needed to Manage the Fire

8. Estimated Costs of Managing the Fire

9. Contingency Actions

10. Information Plan

11. Decision Criteria for Routine Validation

12. Post Burn Evaluation

13. Summary Statement

14. Required Signatures.

Issue 2: Differences exist between agency interpretation and use of Maximum Allowable Perimeter (MAP).

Discussion:

Direction through adopted recommendations from the Final Report of the Fire Management Policy Review Team, May 1989, has led to the incorporation of a maximum allowable perimeter (MAP) determination for each prescribed natural fire. This perimeter is negotiated in the planning phase to describe potential resource impacts, area to be treated by this fire prescription, and delineation of the capability of local resources to manage the fire.

National Park Service direction, NPS-18, Section III, Chapter 5, page 15, and Forest Service direction, FSM 5142.2 B 3, both require that a maximum size be determined for each prescribed natural fire. The term, maximum allowable perimeter, has been widely accepted as a standard by both agencies in prescribed natural fire management. Interpretation of a key element in application of this MAP concept has caused confusion regarding the intent of setting a maximum size.

Forest Service interpretation and policy find that once the MAP is defined and approved by the line officer, it cannot be altered. Protection of this perimeter from fire is an expense of the programmed allocated funds described by the project plan. Where exceedance of the perimeter cannot be prevented through the use of allocated funds and committed resources, the fire is declared a wildfire and an appropriate suppression response is determined through the Escaped Fire Situation Analysis (EFSA) process.

National Park Service policy and interpretation allows for successive redefinition of the maximum planned size if the fire approaches the planned perimeter. There is a provision to determine an ultimate acceptable size through the Fire Situation Analysis (FSA). If the new, larger size is not acceptable, the fire must be held, through suppression actions if necessary, at the original planned boundary.

Both agencies have had success in applying these interpretations since 1990. The need for consistent application and a standardized approach is required to both meet recent direction in interagency cooperation and to best fulfill the needs of an escalating program.

Applications by the Forest Service have allowed and encouraged the development of perimeters within the MAP where specific holding actions are planned to occur to reduce the threat of the fire exceeding the approved MAP. These lines-on-the-map are secondary to the MAP and are part of the overall program of action for managing that particular PNF. Applications by NPS have been similar, but have used the terminology differently. The final determination of fire location is described in agency guidelines as the ultimate acceptable size. During specific operations, NPS is using the MAP to represent the lines-on-the-map within the ultimate acceptable size. At the location of the MAP, and successively defined MAPs if necessary, fire suppression actions are identified in the FSA for holding, delaying, or subverting the movement of the fire.

From this analysis, it is obvious that the two agencies are using very similar actions in prescribed natural fire implementation. Both develop an ultimate acceptable size for each fire, both establish line-

on-the-map or management action points where contingency or holding actions will be implemented in response to fire proximity to these points, and both exercise the ability to convert the fire designation from a PNF to a wildfire when conditions are no longer consistent with the approved plan and prescription. However, the actual perception of what a MAP actually is and how it is used in PNF management is different. One interpretation establishes a fixed MAP with no allowance for change while the other permits establishment of a MAP with successive redefinitions of that MAP if justified.

One agency is using the MAP as the ultimate acceptable size of the fire while the other is using the MAP as intermediate management action lines or points within the ultimate acceptable size. This inconsistency in PNF implementation is a source of misunderstanding of other agency policy and procedures by respective agency personnel, a source of confusion for and cause for lack of trust by the general public, and a potential source of misrepresentation or misunderstanding by the media.

Considerations/Options:

There is a strong need to implement modifications to this element of the program. In reviewing the need for and intent of defining acceptable limits of each fire in the planning stage, the interpretation of the term itself, maximum allowable perimeter, needs to be understood and accepted or changed.

After examination of this issue, three potential options can easily be identified which could alleviate this inconsistency. These options include:

- ◆ Utilize the existing term maximum allowable perimeter (MAP) to reflect the ultimate planned fire size as currently implemented by the Forest Service (fixed fire boundary not subject to change).
- ◆ Utilize the existing term maximum allowable perimeter to reflect the ultimate planned fire size as currently implemented by the National Park Service (flexible fire boundary that can be successively redefined).
- ◆ Utilize a new common term to describe the ultimate acceptable size for all prescribed natural fires.

Proposal:

The term, maximum manageable area (MMA), may be a better descriptor to meet the prescribed natural fire geographic or spatial prescription element. The use of this term can replace the term maximum allowable perimeter and remain consistent with the Forest Service's application of MAP and the NPS application of maximum planned extent of the fire. In many situations in both agencies, although the perimeter is designated on a topographic map, the actual maximum allowable perimeter is described in terms of numbers of acres or in area potentially affected by management of the fire. The use of a maximum manageable area will provide a better description of the actual extent of the fire, and:

- ◊ the MMA will be developed as part of the initially approved burn plan,
- ◊ all actions planned to reduce fire spread will be annotated by Holding Lines that are developed within the MMA and displayed in the approved planning document,

- ◊ once established in the PNF Burn Plan and approved by the agency administrator, this fire size is fixed and not subject to change,

Special Note: As in any fire situation, the complex nature of fires and land management precludes the ability of managers to write a set of guidelines or directions that cover all potential situations. Past experiences and recognition of future potential situations require the following consideration regarding the rigid nature of drawing lines on a map.

There may be isolated cases where a wildfire status of a fire exceeding an established MMA is not prudent or logical. In these situations, experiences from past PNF actions and anticipated in the future may indicate that the planned fire size should be exceeded by the PNF on a very small or non-threatening scale. Fire management options may include:

- Constraining the fire spread to the small or non-threatening exceedance of the original acceptable area using available holding forces and the same funding base currently in use for management of the PNF. This return must be accomplished within two burning periods.
- In the case of relatively long range spotting, treat an isolated spot generated by this natural process as a separate fire and determine PNF or wildfire designation for this new ignition separately from the original PNF and based on criteria as they apply to this fire.

Situations that develop such as these, may be treated outside the scope of clear written guidelines and established direction. Decisions regarding appropriate actions should include concurrence from State, Regional, and/or National levels.

- ◊ the MMA will define firm limits of management capability to accommodate the social, political, and resource impacts for all PNFs,

Recommendation:

It is recommended that the term maximum manageable area (MMA) be adopted and replace the term maximum allowable perimeter (MAP) as the descriptor for defining the geographic or spatial element in prescribed natural fire prescriptions.

Maximum manageable area will be a more suitable term for this purpose. This term will have a much stronger management connotation, will be less apt to foster inconsistent interpretation, and will best represent the intent of the prescribed fire application. It will provide for a closely directed fire management application in a specific area defined by resource objectives, fire and weather prescription elements, social needs, political considerations, and management capability.

Section 3: Issues related to more efficient prescribed natural fire operational management.

Issue 1: Review of Prescribed Fire Manager position and development of Prescribed Natural Fire Manager position.

Discussion:

During management of prescribed natural fires, specialized experience and training is highly desirable. Some concern has been expressed that under the new NWCG system, prescribed natural fires will be managed by Prescribed Fire Managers. Since no special stipulations or requirements for natural fire experience and training are included in the description of the Prescribed Fire Manager, concerns exist that use of this position as currently described may dilute the quality of prescribed natural fire management and reduce program effectiveness and efficiency.

A sub-group was assigned the evaluation of this issue and requested to determine if a specific position is necessary, and if so, how to categorize it (either as an extension of the existing Prescribed Fire Manager or as a new distinct position). The sub-group determined that sufficient differences between management ignited prescribed fire and prescribed natural fire management exist to warrant a separate position description and requirements for individuals charged with management of prescribed natural fires. Following discussion with qualifications systems managers and Prescribed Fire and Fire Effects Working Team members, it was decided that the most appropriate method for resolution of this issue is to develop a new position designated as a Prescribed Natural Fire Manager, as opposed to enhancing the existing Prescribed Fire Manager position.

As prescribed fire applications increase, a greater demand and higher reliability will be placed on these positions. Significant differences in experience, resource considerations, and fire type and duration require separation of these general management positions. It is also recognized that a delegation of authority letter must be executed from the agency administrator to the PNF Manager to delegate and validate the authority to implement the approved PNF Burn Plan.

Proposal:

Review the roles associated with this position, existing Forest Service references to this position, and complete the following tasks:

1. Develop a position description for Prescribed Natural Fire Manager position. This description will include definition of specific qualifications and experience necessary to perform in this role. It will also include a description of necessary roles and responsibilities and training requirements.

2. Determine if creation of a new position task book or slight modification to existing Prescribed Fire Manager position task book is desirable and necessary. This position task book will be comparable to other position task books already developed for the NWCG Prescribed Fire Qualifications and Training System.

Completion of these tasks is desirable by the end of calendar year 1995. Draft information will be transmitted to all agencies for review prior to the 1996 fire season. Following an evaluation of effectiveness, the position description and task book will be revised as necessary in 1996. Upon completion of the final position task book, position description, experience and training requirements, the position will be adopted by all agencies involved in prescribed fire management. Ultimately, if this effort is successful and the position fills the indicated niche, permanent addition of it to the Prescribed Fire Qualifications and Training System will be requested through NWCG.

ISSUE 2: Mandatory use of the Rare Event Risk Assessment Procedure (RERAP) and Fire Area Simulator (FARSITE) computer model by Prescribed Fire Behavior Analysts.

Discussion:

As new technology becomes available for application in management situations, it should be utilized to facilitate management actions to the greatest degree possible. However, making newly emerging technology mandatory before all potential users have had the opportunity to become fully functional in its use through training and experience, is premature and unreasonable. The RERAP process has been presented at three Prescribed Fire Behavior Analyst training course to date but less than 100 practicing RXFAs have completed this training. In addition, users must be able to access and extract historical fire weather data from the Weather Information Management System (WIMS) in Kansas City via the Forest Service Data General computer system or through a modem and specialized software for non-Data General users. This requirement poses a limitation to many users who are not experienced in accessing and manipulating this weather data.

The FARSITE computer program represents a large fire growth model being developed by the Intermountain Fire Sciences Lab in Missoula, under contract with the National Park Service. Requirements to run this model include IBM operationally compatible computers; specialized memory requirements; Windows applications; Geographic Information System inputs of fuel models and topographic themes; and weather information in the form of wind files. Hardware requirements restrict the widespread use of this model at this time and GIS requirements further limit the number of users. At this time, no training sessions have been completed and the Fire Lab has handed off about 100 copies of the program to selected users.

As the capability for users to understand and utilize these programs becomes greater, their use in prescribed natural fire management will increase. However, until the hardware and input needs are no longer limiting, use of these programs should not be mandatory for Prescribed Fire Behavior Analysts.

Proposal:

Defer mandatory requirement of RERAP and FARSITE use on prescribed natural fire management until hardware and input limitations are successfully removed through training sessions and computer acquisition.

Require RXFAs to estimate most severe fire and weather characteristics through the best available technology (no required software) and add a quantitative verification of allowable perimeter risk and validation.

ISSUE 3: Qualifications of Prescribed Fire Behavior Analysts

Discussion:

The Prescribed Fire Behavior Analyst (RXFA) position has evolved as the highest level fire behavior position in the prescribed fire organization. The Fire Behavior Analyst (FBAN) used in the suppression program has evolved over the last 15 years in response to a need for better fire behavior information and increased safety on wildfires. The job responsibilities, work, and complexity have greatly expanded during recent years. This same need for better fire behavior information and safety has extended to prescribed fire organizations and the RXFA position was created.

The RX-590 course, Prescribed Fire Behavior Analyst, was developed several years ago as the Fire Behavior Analyst Course (S-590) was being redefined. This course has been designated as the highest level fire behavior course in the prescribed fire curriculum. Prerequisites for this course include successful completion of S-490, Advanced Fire Behavior Calculations, and proficiency in the use of the BEHAVE fire prediction program. The minimum position requirement for an RXFA is Fire Behavior Specialist (RXFS) and Ignition Specialist II (RXI2).

Since the RXFA is highly specialized and important to the prescribed fire organization, prescribed natural fire management in particular, the question of whether specific qualifications should be required surfaced during the Working Team's meeting. After review of the existing standards and discussion of the position, it was decided to fully adhere to the existing standards for this position.

Proposal:

Do not create any additional qualification standards for the Prescribed Fire Behavior Analyst position. Continue to recognize existing standards as adequate for this position (RX-590 course; successful documented performance on one training fire as an RXFA).

ISSUE 4: Requirement for Prescribed Fire Behavior Analyst (RXFA) to be part of team preparing PNF Burn Plans.

Discussion:

No interagency standards exist for the makeup of teams responsible for preparation of prescribed natural fire burn plans, the duration that they must be in place, and what products they must create. Since the Prescribed Fire Behavior Analyst is significantly important in predicting the potential area and extent of burning, assessing risk, and validating the maximum allowable perimeter, this position logically seems to be a necessary component of any team preparing a prescribed natural burn plan.

An RXFA should be required to be present during preparation of PNF burn plans, should provide input regarding the potential of the fire, should assess potential risk, and make extended fire behavior predictions for comparisons of expected and most severe fire area situations.

Proposal:

Establish interagency policy stating that the Prescribed Fire Behavior Analyst position is a mandatory component of all teams preparing prescribed natural fire burn plans by the year 1998. An RXFA does not have to remain continually involved with the PNF after completion of the Burn Plan. The Prescribed Natural Fire Manager will determine the necessary level of involvement of the RXFA during the implementation of the approved prescribed natural fire burn plan.

NARTC course coordinators and course selection committees will be informed of this requirement to ensure proper nomination and prioritization of trainees.

ISSUE 5: Confusion associated with definition of terms related to types of natural fires.

Discussion:

After review of this issue, it appears difficult to define the thought process behind development of this issue. Several points need clarification. First, since there is no universal definition and use of status of prescribed natural fires, there seems little possibility for confusing terms that are not frequently used. Second, it is possible that the real question or issue here is not what the definitions are but whether there should be commonly accepted definitions of prescribed natural fire types developed. Third, much of the concern apparently stems from the reporting requirements of the PNF program which require daily analysis, status, and approval, even for fires presenting no apparent consequence.

The confusion or misunderstanding currently occurring is present in regard to terms used to describe the activity level of prescribed natural fires. Since no interagency definitions have ever been developed for dividing prescribed natural fire status into sub-categories, local terminology developed out of need is confusing. In the 1990 Greater Yellowstone Area Fire Management Planning and Coordination Guide, reference was made to describing prescribed natural fires as active or inactive. This breakdown was based solely on current fire activity. Active fires were defined as those where the fire area was expected to increase by 10% or 10 acres during a single burning period, whichever was less. All fires exhibiting activity at lower levels than this would be classified as inactive. At least some other Forest Service PNF programs adopted this definition and used it to categorize PNF potential for streamlined reporting.

Classification of fires based on current fire activity does not allow consideration of potential activity and may not offer adequate risk recognition, fire behavior, threats to planned perimeters and unit boundaries, and external influences that can have marked influence on Agency Administrators' decisions. A designation of active implies that the fire is exhibiting vigorous fire behavior and therefore, must be given close scrutiny and attention. By definition then, an inactive fire would be exhibiting only minimal fire behavior, growth, and would seemingly, be undeserving of close attention and concern. A classification such as this would be markedly inadequate and inefficient if interpreted in this manner. In fact, most significant prescribed natural fires that occurred in 1988 and 1994 would have been considered inactive for much of their duration, but most importantly, would have been considered inactive during that phase when close attention and evaluation were substantially important to the Agency Administrator's decision making process.

In other situations, agencies rely on a complexity classification to define differences in prescribed natural fires. This also represents an inconsistent approach since all agencies do not utilize the same complexity rating scheme and NWCG has offered a complexity analysis as an optional guide only. In some areas, agencies consider all PNFs to be complex in nature and use only this designation.

There appears to be only limited value in sub-classification of prescribed natural fires. Doing this also presents the possibility of increased confusion and misinterpretation of the various designations. It also creates an additional layer of classification and related terminology, increasing the volume of information associated with prescribed natural fire management.

In the GYA instance, fires were classified to aid local managers in determining the joint interagency management capability for the area. The number of active fires became an important management threshold. Another instance where classification of PNFs may be useful is in determining daily certification and revalidation needs and documentation requirements for various fires. Currently, all prescribed natural fires are considered equal and have the same reporting, documentation, and certification requirements placed on them. This necessitates rigid time commitment and physical presence requirements of Agency Administrators during all prescribed natural fires regardless of potential, risk, and significant external influences. These requirements, however, become very important during fires of high potential, risk, and significant external influences. A breakdown of PNFs into different types is not necessary to resolve this issue but clarification of differences in management involvement and certification requirements is desirable (See **SECTION 1, ISSUE 4, Discussion and Proposal**).

Proposal:

The actual issue here does not involve confusion associated with classifying PNFs but whether there should be a classification system created for this purpose. Based on the above discussion, there is no significant value in further classification of prescribed natural fires. **All prescribed natural fires should be considered only as prescribed natural fires.** If classification of prescribed natural fires is necessary to describe the situation and relative importance of fires, it should be done at the local level and specified in a unit or interagency fire management plan. Any subdivision of further breakdown should only be done if all involved parties fully understand the definitions and intended uses of those breakdowns. Possible uses of a classification system that potentially could be beneficial to the efficiency of program management include: reduced reporting; risk rating of significant multiple fires within the program locally and on an interagency basis regionally and Nationally; planned economic consideration; resource needs and commitments; and line officer certification. Possibly, the two best applications of such a classification would be for streamlining reporting requirements and prioritization during multiple fire situations.

Prepared by:

David L. Bunnell

G. Thomas Zimmerman

**Co-Chairman, Prescribed Fire Program Task Group
National Interagency Fire Center
Boise, ID 83705**